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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,276	04/08/2004	Ming-Kuen Lin	10114021	9390
34283	7590	12/27/2005	EXAMINER	
QUINTERO LAW OFFICE 1617 BROADWAY, 3RD FLOOR SANTA MONICA, CA 90404			CHEN, WEN YING PATTY	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/821,276	<b>Applicant(s)</b> LIN ET AL.	
	<b>Examiner</b> Wen-Ying P. Chen	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Newly submitted claims 10 and 11 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claim 10 contains the limitation of “a light pipe, coaxially disposed with the optical axis” which constitutes a different embodiment as originally presented cited in claim 1: “a light pipe, non-coaxially disposed with the optical axis”.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 10 and 11 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Drawings***

The drawings were received on Oct. 24, 2005. These drawings are acceptable.

### ***Response to Amendment***

Applicant's Amendment filed Oct. 24, 2005 has been received and entered. Claims 10 and 11 are newly added per the Amendment. However, due to the fact that claim 10 comprises of a different embodiment than that of claim 1, therefore, claim 10 and its dependant claim, claim 11 is withdrawn from consideration. See explanation as set forth above. Therefore, claims

1-11 are pending in the current application, but claims 10 and 11 are withdrawn from consideration.

***Claim Rejections - 35 USC § 103***

Claims 1 and 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamori et al. (US 2002/0008791) in view of Davenport et al. (US 5398171).

With respect to claim 1 (Amended): Okamori et al. disclose in Figure 1 an optical system comprising:

a light source (element 10) for emitting lights along a first direction to define an optical axis (element 7), wherein the light source is coaxially disposed with the optical axis; and

a light pipe (element 3), disposed from the light source and transmitting lights with a virtual arc array (element 60).

Okamori et al. fail to disclose that the light pipe is non-coaxially disposed from the light source, wherein the light pipe deviates from the optical axis by a predetermined distance in a second direction perpendicular to the first direction, so that the lights with the virtual arc array is asymmetrical.

However, Davenport et al. disclose in Figure 2 an optical system comprising: a light pipe (element 16), non-coaxially disposed from the light source and transmitting lights with a virtual arc array (element 22), wherein the light pipe deviates from the optical axis by a predetermined distance in a second direction perpendicular to the first direction, so that the lights with the virtual arc array is asymmetrical.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct an optical system as taught by Okamori et al. wherein the light pipe is disposed non-coaxially from the light source as taught by Davenport et al., since Davenport et al. teach that by placing the light pipe off-axis enables the light beam to be transmitted with a wider angle, thus achieve high illumination density (Column 5, lines 61-65).

As to claim 3: Okamori et al. further disclose in Figure 1 an optical system comprising a convergent lens (element 2) positioned between the light source (element 10) and the light pipe (element 3) in order to focus the lights from the light source to the light pipe.

As to claim 4: Okamori et al. further disclose in Figure 1 that the light pipe comprises a lens module (element 4) for receiving focused lights transmitted from the convergent lens (elements 1 and 2), and outputting the focused lights uniformly (Paragraph 0083).

As to claim 5: Okamori et al. further disclose in Figure 1 an optical system comprising a relay lens module (element 4) and a projection plane (element 5), wherein the relay lens module relays the lights from the light pipe to the projection plane (Paragraph 0083).

As to claim 6: Okamori et al. further disclose in Figure 1 that the relay lens module comprises a spherical lens (element 42) and an aspherical lens (element 43).

As to claim 7: Okamori et al. disclose in Paragraphs 0036 and 0068 that the projection display device is a DMD projector, which is also called the DLP projector.

As to claims 8 and 9: Davenport et al. further disclose in Figure 2 that the light pipe deviates oppositely from the light source such that the direction of deviation corresponds to a non-coplanar axis direction as to where the optical axis lies, i.e. Z-axis.

***Allowable Subject Matter***

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior arts cited fail to specifically disclose that the predetermined distance is substantially between 0.3 and 0.7 mm.

***Response to Arguments***

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2871

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Ying P. Chen whose telephone number is (571)272-8444.


The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Ying P Chen  
Examiner  
Art Unit 2871

WPC  
12/20/05

  
ANDREW SCHECHTER  
PRIMARY EXAMINER